

Claims 16 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang, U.S. Patent No. 5,604,360, in view of Mizutani, U.S. Patent No. 5,043,785.

Claims 17, 18, and 20-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zhang in view of Mizutani.

All these contentions are respectfully traversed. In fact, all of the §103 rejections are based partly on Mizutani. The rejection alleges that Mizutani shows the claimed crystalline semiconductor film having a plurality of crystals extending in a crystal growth direction. However, this contention is respectfully traversed.

Mizutani's FIGs. 7A-7C show nuclei 72 being formed. The nuclei are grown into mutually conducting islands. A continuous film 73 is obtained by further growth as described in column 4, lines 9-17. This film 73 is the first semiconductor film for a photosensor and MOSFET (column 3, lines 1-61).

However, FIGs. 7A-7C merely show how the crystal nuclei grow. Mizutani does not teach how the nuclei are located on a substrate. Therefore, it is unclear if Mizutani intends to coincide crystal growth with the carrier moving direction.

The present invention recognizes that when the charge transfer direction coincides with the crystal growth, carriers can move continuously in the crystal semiconductor. Therefore,

all of these claims should be in condition for allowance for this reason.


The secondary references do not improve the prima facie showing. Funakoshi merely shows a vertical CCD in a horizontal CCD. Zhang shows a crystal growth direction indicated by arrow 105. This is parallel with the substrate 101 in FIG. 2B. However, Zhang is not related to a charge transfer device, but rather to a liquid crystal display device.

In view of the above amendments and remarks, therefore, all of the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

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Respectfully submitted,

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